

SEQUENCE LISTING

SEQ ID NO:1

Mouse SSG amino acid sequence

5 MGELPFLSPEGARGPHINRGSLSSLEQGSVTGTEARHSLGVLVSYVSNSRVPWWNIKS
CQQKWDRQILKDVSLYIESQIMCILGSSGSGKTTLDAISGRLRRTGTLEGEVFVNGCE
LRRDQFQDCFSYVLQSDVFLSSLTVRETLRYTAMLALCRSSADFYNKKVEAVMTELSLSH
VADQMIIGSYNFGGISSGERRVSIAAQLLQDPKVMMLDEPTTGLDCMTANQIVLLAELA
RRDRIVIVTIHQPRSELFQHFDKIAILTYGELVFCGTPEEMLGFFNNCGYPCPEHSNPFD
10 FYMDLTSVDTQSREREIETYKRVQMЛЕCAFKESDIYHKILENIERARYLKTLPMPFKTK
DPPGMFGKLGVLLRRVTRNLMRNKQAVIMRLVQNLIMGLFLIFYLLRVQNNTLKGAVQDR
VGLLYQLVGATPYTGMLNAVNLFPMLRAVSDQESQDGLYHKWQMLLAYVLHVLPFSVIAT
VIFSSVCYWTGLGLYPEVARFGYFSALLAPHLIGEFLTLVLLGIVQNPNIVNSIVALLSI
SGLLIGSGFIRNIQEMPIPLKILGYFTFQKYCCEILVVNEFYGLNFTCGGSNTSMLNHPM
15 CAITQGVQFIEKTCPGATSRFTANFLILYGFIPALVILGIVIFKVRDYLISR

SEQ ID NO:2

Mouse SSG nucleotide sequence

20 GGGACAGGCCACTAGAAAATTCACTTGCATTGCTTCCTGCTAGCCATGGGTGAGCTGCC
CTTTCTGAGTCCAGAGGGAGCCAGAGGGCCTCACATCAACAGAGGGTCTCTGAGCTCCCT
GGAGCAAGGTTCGGTACCGGCACAGAGGCTGGCACAGCTTAGGTGTCCTGCATGTGTC
CTACAGCGTCAGCAACCGTGTGGCCTTGGTGGAACATCAAATCATGCCAGCAGAAGTG
GGACAGGCAAATCCTCAAAGATGTCTCCTTGTACATCGAGAGTGGCCAGATTATGTGCAT
25 CTTAGGCAGCTCAGGCTCAGGGAAAGACCACGCTGGACGCCATCTCCGGGAGGCTGCG
GCGCACTGGACCCCTGGAAAGGGAGGTGTTGTGAATGGCTGCGAGCTGCCAGGGACCA
GTTCCAAGACTGCTTCTCCTACGTCCCTGCAGAGCGACGTTCTGAGCAGCCTCACTGT
GCGCGAGACGTTGCGATAACACAGCGATGCTGGCCCTCTGCCAGCTCCGGACTTCTA
CAACAAGAAGGTAGAGGCAGTCATGACAGAGCTGAGCCTGAGCCACGTGGCGGACCAAAT
30 GATTGGCAGCTATAATTTGGGGAAATTCCAGTGGCGAGCGGCGCCAGTTCCATCGC
AGCCCAACTCCTCAGGACCCCAAGGTCATGATGCTAGATGAGCCAACCACAGGACTGGA
CTGCATGACTGCAAATCAAATTGTCCTCTTGGCTGAGCTGGCTCGCAGGGACCGAAT
TGTGATTGTCACCATCCACCAAGCCTCGCTCTGAGCTTCCAACACTTCGACAAAATTGC
CATCCTGACTTACGGAGAGTTGGTCTGTGGCACCCAGAGGAGATGCTGGCTTCTT

CAATAACTGTGGTTACCCCTGTCCCTAACATTCCAATCCCTTGATTTTACATGGACTT
GACATCAGTGGACACCCAAAGCAGAGAGCAGGGAAATAGAAACGTACAAGCGAGTACAGAT
GCTGGAATGTGCCTTCAAGGAATCTGACATCTATCACAAAATTCTGGAGAACATTGAAAG
AGCACGATACTGAAAACCTTACCCATGGTCCTTCAAAACAAAAGATCCTCCTGGGAT
5 GTTCGGCAAGCTTGGTGCCTGCTGAGGCAGTAACAAGAAACTTAATGAGGAATAAGCA
GGCAGTGATTATGCGTCTCGTTAGAATCTGATCATGGGCCTCTCCTCATTTCACCT
TCTCCCGTCCAGAACACACGCTAAAGGGCGCTGTGCAGGACCGCGTGGGCTGCTCTA
TCAGCTTGTGGGTGCCACCCATACACCGGCATGCTCAATGCTGTGAATCTGTTCCAT
GCTGAGAGCCGTCAAGCAGCAGGAGAGTCAGGATGGCCTGTATCATAAGTGGCAGATGCT
10 GCTCGCCTACGTGCTACACGTCCTCCCTCAGCGTCATGCCACGGTCATTTCAGCAG
TGTGTGTTATTGGACTCTGGCTTGTATCCTGAAGTTGCCAGATTGGATATTCTCTGC
TGCTCTTTGGCCCCTCACTTAATTGGAGAATTCTAACACTTGTGCTGCTGGTATAGT
CCAAAACCCTAATATTGTCACAGTATAGTGGCTCTGCTCAGCATCTCTGGCTGCTTAT
TGGATCTGGATTATCAGAAACATACAAGAAATGCCATTCTTAAAAATCCTGGGTTA
15 TTTTACATTCCAAAAAAACTGTTGTGAGATTCTCGTGGTCAATGAGTTTACGGCCTGAA
CTTCACTTGTGGTGGATCCAACACCTCTATGCTAAATCACCCGATGTGCCATCACCA
AGGGGTCCAGTTCATCGAGAAAACCTGCCAGGTGCTACATCCAGATTCACGGCAAACCT
CCTCATCTTATATGGTTATCCAGCTCTGGTCACTCTAGGAATAGTGAATTAAAGT
CAGGGACTACCTGATTAGCAGATAGTTAAGATGACAGGCAGGAAAGGGTTAATGGCAGG
20 CACGCCACTGTGGAGCACAGAGAAGTACTGTCTTCAACCATCAGGATTCCATCTGCGAC
CCTTGTGTCTGACCCCTGTCTATCCGGAGCCCAAGGGCAACGAGAACTCACAGCCCT
CTGCTATTCCAGCTGTGGGCAATGTGGTCTGGACATTGTGACTGAACGGTCCAAT
AATGTAAATAATAATTACATAAACCTACAGGACATT

25

SEQ ID NO:3

Human SSG amino acid sequence

MGDLSSLTPGGSMGLQVNRGSQSSLEGAPATAPEPHSLGILHASYSVSHRVRPWWDITSC
30 RQQWTRQILKDVSPLYVESGQIMCILGSSGSGKTLDDAMSGRLGRAGTFLGEVYVNGRAL
RREQFQDCFSYVLQSDTLLSLTVRETLHYTALLAIRGNPGSFQKKVEAVMAELSLSHV
ADRLIGNYSLGGISTGERRRVSIAAQLLQDPKVMLFDEPTTGLDCMTANQIVVLLVELAR
RNRIVVLTIHQPRSELFQLFDKIAILSFGELEIFCGTPAEMLDFFNDCGYPCPEHSNPFD
YMDLTSVDTQSKEREIETSKRVQMIESAYKKSAICHKTLKNIERMKHLKTLPMVPFKTD

SPGVFSKLGVLRRVTRNLVRNKLAVITRLLQNLIMGLFLLFFVLRVRSNLKGAIQDRV
GLLYQFVGATPYTGMLNAVNLFPVLRRAVSDQESQDGLYQKWQMMLAYALHVLPSVVATM
IFSSVCYWTLGLHPEVARFGYFSAALLAPHLIGEFLTLVLLGIVQNPNIVNSVALLSIA
GVLVGSGFLRNIQEMPIPKIISYFTQKYCSEILVVNEFYGLNFTCGSSNVSVTTNPMC
5 AFTQGIQFIEKTCPGATSRFTMNFLILYSFIPALVILGIVVFKIRDHLISR

SEQ ID NO:4

Human SSG nucleotide sequence

10 GTCAGGTGGAGCAGGCAGGGCAGTCTGCCACGGCTCCCCACTGAAGCCACTCTGGGA
GGGTCCGGCCACCAGAAAATTGCCAGCTTGCTGCCTGTTGGCATGGTGACCTCTC
ATCTTGACCCCCGGAGGGTCCATGGGTCTCCAAGTAAACAGAGGCTCCAGAGCTCCCT
GGAGGGGGCTCCTGCCACCGCCCCGGAGCCTCACAGCCTGGCATCCTCCATGCCTCCTA
15 CAGCGTCAGCCACCGCGTGAGGCCCTGGTGGGACATCACATCTGCCGGCAGCAGTGGAC
CAGGCAGATCCTCAAAGATGTCTCCTGTACGTGGAGAGCAGGCAGATCATGTGCATCCT
AGGAAGCTCAGGCTCCGGAAAACCACGCTGCTGGACGCCATGTCCGGAGGCTGGGGCG
CGCAGGGGACCTTCTGGGGAGGTGTATGTGAACGGCCGGCGCTGCCGGAGCAGTT
CCAGGACTGCTTCTCCTACGTCTGCAGAGCAGACACCCCTGCTGAGCAGCCTCACCGTGCG
20 CGAGACGCTGCACTACACCGCGTGCTGGCATCCGCCGGCAATCCGGCTCCTTCCA
GAAGAAGGTGGAGGCCGTATGGCAGAGCTGAGTCTGAGCCATGTGGCAGACCGACTGAT
TGGCAACTACAGCTTGGGGGCATTCCACGGGTGAGCGGCCGGGTCTCCATCGCAGC
CCAGCTGCTCCAGGATCCTAACGGTCACTGCTGGTGGAACTGGCTCGCAGGAACCGAATTGT
CATGACTGCTAACAGATTGTCGTCCTCTGGTGGAACTGGCTCGCAGGAACCGAATTGT
25 GGTTCTCACCATTCACCAGCCCCGTTCTGAGCTTTCTGAGCTCTTGCAGCAACCAACCACAGGCCTGGACTG
CCTGAGCTTCGGAGAGCTGATTTCTGAGCTGGCACGCCAGCGGAATGCTGATTCTCAA
TGACTGCGGTTACCCCTGCTGAACATTCAAACCCCTTGACTTCTATATGGACCTGAC
GTCAGTGGATAACCAAAGCAAGGAACGGAAATAGAAACCTCCAAGAGAGTCCAGATGAT
AGAATCTGCCTACAAGAAATCAGCAATTGTCATAAAACTTGAAGAATATTGAAAGAAT
30 GAAACACCTGAAAACGTTACCAATGGTCCTTCAAAACCAAAGATTCTCCTGGAGTTT
CTCTAAACTGGGTGTTCTCCTGAGGGAGAGTGACAAGAAACTGGTGAGAAATAAGCTGGC
AGTGATTACGCGTCTCCTCAGAATCTGATCATGGTTGTTCTCCTTCTCGTTCT
GCGGGTCCGAAGCAATGTGCTAAAGGGTGTATCCAGGACCGCGTAGGTCTCCTTACCA
GTTTGTGGCGCCACCCGTACACAGGCATGCTGAACGCTGTGAATCTGTTCCCGTGCT

GCGAGCTGTCAGCGACCAGGAGAGTCAGGACGGCCTCTACCAGAAGTGGCAGATGATGCT
GGCCTATGCAC TG CAC GT C C T C C C T C A G C G T G T G C C A C C A T G A T T T C A G C A G T G T
GTGCTACTGGACGCTGGGCTTACATCCTGAGGTTGCCGATTGGATATTTCTGCTGC
TCTCTGGCCCCCACTTAATTGGTGAATTCTAACTCTTGCTACTTGGTATCGTCCA
5 AAATCCAAATATAGTCAACAGTGTAGTGGCTCTGCTGTCCATTGCCGGGTGCTGTTGG
ATCTGGATTCCCTCAGAAACATACAAGAAATGCCATTCTTAAAATCATCAGTTATT
TACATTCAAAAATATTGCAGTGAGATTCTTAGTCAATGAGTTCTACGGACTGAATT
10 CACTTGTGGCAGCTCAAATGTTCTGTGACAACATAATCCAATGTGTGCCCTCACTCAAGG
AATTCAATTCAATTGAGAAAACCTGCCAGGTGCAACATCTAGATTACAATGAACATTCT
15 GATTTGTATTCAATTCCAGCTCTGTGACACTGAAATGAGAGTGCATGTATTCTTCTTGACAG
GGATCATCTCATTAGCAGGTAGTGAAAGCCATGGCTGGAAAATGGAAGTGAAGCTGCCG
ACTGTGCATGACTGCTCTGAACGTCTGAAATGAGAGTGCATGTATTCTTCTTGACAG
GACATCTCAAGTCTTTAACCATTAAGACTCCATTGTGCCCTTGATCCAAGCAGGCC
TTGAATGCAATGGAAGTGGTTATAGTCCCTGCTCTACAACTTGCAGGGACATGTGGT
TATTTGGAAATTGTGACTGAGCGGACCCAGAATGTAAATAATTCAAAACCTATGGG

SEQ ID NO:5

SSG signature sequence 1

20 AALLAPHLIGEFLTLVLL

SEQ ID NO:6

25 SSG signature sequence 2

FIPALVILGIV

SEQ ID NO:7

30 Exon 1 of hSSG

GTCAGGTGGAGCAGGCAGGGCAGTCTGCCACGGCTCCCAACTGAAGCCACTCTGGGA
GGGTCCGGCCACCAGAAAATTGCCAGCTTGCTGCCATGGGTGACCTCTC
ATCTTGACCCCCGGAGGGTCCATGGGTCTCCAAGTAAACAGAGGCTCCAGAGCTCCCT

GGAGGGGGCTCCTGCCACCGCCCCGGAGCCTCACAGCCTGGCATTCCATGCCTCCTA
CAGCGTCAG

5 **SEQ ID NO:8**

Exon 2 of hSSG

CCACCGCGTGAGGCCCTGGTGGGACATCACATCTGCCGGCAGCAGTGGACCAGGCAGAT
CCTCAAAGATGTCTCCTTGTACGTGGAGAGCAGGGCAGATCATGTGCATCCTAGGAAGCTC

10 AG

SEQ ID NO:9

Exon 3 of hSSG

15 GCTCCGGGAAAACCACGCTGCTGGACGCCATGTCCGGGAGGCTGGGGCGCGGGGACCT
TCCTGGGGAGGTGTATGTGAACGGCCGGCGCTGCGCCGGGAGCAGTTCCAGGACTGCT
TCTCCTACGTCCTGCAG

SEQ ID NO:10

20 Exon 4 of hSSG

AGCGACACCCCTGCTGAGCAGCCTACCGTGCAGAGACGCTGCACTACACCGCGCTGCTG
GCCATCCGCCGGCAATCCCGCTCCTCCAGAAGAAGGTGG

25 **SEQ ID NO:11**

Exon 5 of hSSG

AGGCCGTACGGCAGAGCTGAGTCTGAGCCATGTGGCAGACCGACTGATTGGCAACTACA
GCTTGGGGGGCATTTCCACGGGTGAGCGGGCGCCGGGTCTCCATCGCAGCCCAGCTGCTCC
30 AGGATCCTA

SEQ ID NO:12

Exon 6 of hSSG

AGGTGATGCTTTGATGAGCCAACCACAGGCCTGGACTGCATGACTGCTAATCAGATTG
TCGTCTCCTGGTGGAACTGGCTCGCAGGAACCGAATTGTGGTCTCACCAATTCAACCAGC
CCCGTTCTGAGCTTTTCAG

5 **SEQ ID NO:13**

Exon 7 of hSSG

CTCTTGACAAAATTGCCATCCTGAGCTTCGGAGAGCTGATTTCTGTGGCACGCCAGCG
GAAATGCTTGATTCTTCAATGACTGCGTTACCCTGTCCTGAACATTCAAACCCCTTT

10 GACTTCTATA

SEQ ID NO:14

Exon 8 of hSSG

15 TGGACCTGACGTCACTGGATAACCAAAGCAAGGAACGGAAATAGAAACCTCCAAGAGAG
TCCAGATGATAGAATCTGCCTACAAGAAATCAGCAATTGTCATAAAACTTGAAGAATA
TTGAAAGAATGAAACACCTGAAACGTTACCAATGGTCCTTCAAAACCAAAGATTCTC
CTGGAGTTTCTCTAAACTGGGTGTTCTCCTGAG

20 **SEQ ID NO:15**

Exon 9 of hSSG

GAGAGTGACAAGAAACTGGTGAGAAATAAGCTGGCAGTGATTACGCGTCTCCTCAGAA
TCTGATCATGGGTTGTTCTCCTTCTTCGTTCTGCGGGTCCGAAGCAATGTGCTAAA
25 GGGTGCTATCCAGGACCGCGTAGGTCTCCTTACCAAGTTGTGGCGCCACCCGTACAC
AGGCATGCTGAACGCTGTGAATCTGT

SEQ ID NO:16

Exon 10 of hSSG

30 TTCCCGTGCTGCGAGCTGTCAGCGACCAGGAGAGTCAGGACGGCCTCTACCAGAAGTGGC
AGATGATGCTGGCCTATGCACTGCACGTCCCTCCCTCAGCGTTGCCACCATGATT
TCAGCAGTGTGTGCTACTG

SEQ ID NO:17

Exon 11 of hSSG

GACGCTGGCTTACATCCTGAGGTTGCCGATTTGGATATTTCTGCTGCTCTTGGC

5 CCCCCACTTAATTGGTGAATTCTAACTCTTGTGCTACTTGGTATCGTCCAAAATCCAAA
TATAGTCAACAGTGTAGTGGCTTGCTGTCCATTGGGGGGCTTGGATCTGGATT
CCTCAG

SEQ ID NO:18

10 Exon 12 of hSSG

AAACATACAAGAAATGCCATTCTTTAAAATCATCAGTTATTTACATTCCAAAATA
TTGCAGTGAGATTCTTAGTCAATGAGTTCTACGGACTGAATTCACTTGTG

15 **SEQ ID NO:19**

Exon 13 of hSSG

GCAGCTCAAATGTTCTGTGACAACATAATCCAATGTGTGCCTCACTCAAGGAATTCAAT

TCATTGAGAAAACCTGCCAGGTGCAACATCTAGATTACAATGAACCTTGATTTGT

20 ATTCATTTATTCCAGCTCTGTACCTAGGAATAGTTGTTCAAAATAAGGGATCATC
TCATTAGCAGGTAGTGAAAGCCATGGCTGGAAAATGGAAGTGAAGCTGCCACTGTGCA
TGACTGCTCTGAACGTCTGAAATGAGAGTGCATGTATTCTTGACAGGACATCTC
AAGTCTTTAACCATTAAGACTCCATTGTGCCTTGGATCCAAGCAGGCCTTGAATGC
AATGGAAGTGGTTATAGTCCCTGCTCTTACAACATTGCAGGGACATGTGGTTATTGGA

25 AATTGTGACTGAGCGGACCCAAAGAATGTAAATAATTCAAAACCTATGGG